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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,522	08/29/2001	Satoru Watanabe	1359.1052	4691

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EXAMINER
WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/940,522	WATANABE ET AL.
	Examiner	Art Unit	
	James S. Wozniak	2655	,

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 December 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _3 and 5-16_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _7, 12, and 14_ is/are allowed.

6)☒ Claim(s) _3,5,6,8-11,13,15 and 16_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _20 December 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All   b)☐ Some * c)☐ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   In response to the office action from 9/20/2004, the applicant has submitted an

amendment, filed 12/20/2004, amending the abstract and Claims 3, 5, and 6-10, while canceling

Claims 1, 2, and 4, adding Claims 11-16, and arguing to traverse the art rejection based on the

limitation regarding a comparison between the upper and lower limit of a reaction time and three

modes of third-party assistance involvement *(Amendment, Page 13)*. Applicant's arguments have

been fully considered, however the previous rejection is maintained due to the reasons listed

below in the response to arguments.

2.   Based on the amendments to the drawings, the examiner has withdrawn the previous

objections directed towards minor informalities.

3.   Based on the amendment of Claim 10, the examiner has withdrawn the previous 35

U.S.C. 101 rejection.

Response to Arguments

4.   Applicant's arguments have been fully considered but they are not persuasive for the

following reasons:

With respect to **Claim 3**, the applicant argues that Marx et al (U.S. Patent: 6,173,266) .

fails to teach a comparison between the upper limit and lower limit of the reaction time in the

ordinary interaction (Amendment, Page 13), however Marx teaches a timeout condition (upper

limit) used to initialize a call transfer to an operator (Col. 8, Lines 20-31; Col. 9, Lines 52-65;

previous office action, page 8).

In response to applicant's argument that the references fail to show certain features of

applicant's invention, it is noted that the features upon which applicant relies (i.e., the

comparison between an upper *and* a lower limit is not claimed; only that an upper *or* lower limit

is used to initialize assistance from a third party is claimed) are not recited in the rejected

claim(s). Although the claims are interpreted in light of the specification, limitations from the

specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26

USPQ2d 1057 (Fed. Cir. 1993).

Thus, since Marx teaches a timeout threshold for determining whether it is necessary to

transfer a user to an operator, the rejection of Claim 3 is maintained.

With respect to **Claims 5 and 15-16**, the applicant argues that Bohacek et al (U.S. Patent:

6,411,687), Marx, and Davis et al (U.S. Patent: 5,583,922) fails to teach a progress of interaction

in including three modes of operator involvement *(Amendment, Page 13)*, however the examiner

notes that Davis teaches progressive modes of interaction operation including updating user data

at an operator terminal, parallel input of data, and telephone call transfer for direct interaction

(Col. 8, Lines 19-35, and Col. 11, Lines 48-58). The applicant also argues that the prior art of

record is not properly combinable, however provides no reasons as to why *(Amendment, Page*

13). Thus, the below rejection is considered to be a sufficient response to these arguments.

The applicant provides no specific arguments directed towards the rejection of **Claims 9**

and 10. Thus, the below rejection is considered to be a sufficient response.

The dependent claims are argued as further limiting their associated rejected parent

claims *(Amendment, Page 13)*, and therefore also remain rejected.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   **Claim 9** is rejected under 35 U.S.C. 102(e) as being anticipated by Bohacek et al *(U.S.*

Patent: 6,411,687).

With respect to **Claim 9**, Bohacek discloses:

A voice information input part for inputting user's voice information from a user terminal

(user phone call to an interactive voice response system which would inherently require a

telephone or similar communication device, Col. 3, Lines 60-65);

A voice recognition part for conducting voice recognition with respect to the voice

information, and analyzing contents of the voice information *(speech recognizer used to collect*

information such as account number or billing data, Col. 3, Line 48- Col. 4, Line 8);

A voice information mediation part for controlling a transmission path of the voice

information in accordance with the contents of the voice information *(detecting user mood based*

upon speech samples to transfer an IVR system user to an operator for assistance, Col. 4, Lines

40-48, and Col. 3, Lines 17-30);

An interaction engine for extracting contents of a response corresponding to the voice

information by referring to a knowledge database, and creating a synthesized voice in accordance

with the contents of a response *(interactive voice response unit that prompts a user for*

information, Col. 3, Lines 60-65, which would inherently require a memory for storing voice

prompts); and

A voice information output part for outputting the synthesized voice, wherein the voice

information mediation part monitors at all times whether or not the user's interaction is being

smoothly conducted, and in a case of determining that the user's interaction is not being

smoothly conducted, allows a third-party user to participate in interaction between the user and

the interaction engine from another terminal as a helper *(requesting user information, Col. 3,*

Lines 60-65, and transferring the call of a frustrated IVR system user to an operator, Col. 3,

Lines 17-30, and Col. 4, Lines 40-48).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   **Claims 3, 6, and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bohacek et al (U.S. Patent: 6,411,687) in view of Marx et al *(U.S. Patent: 6,173,266)*.

With respect to **Claim 3**, Bohacek discloses:

A voice information input part for inputting user's voice information from a user terminal

(user phone call to an interactive voice response system which would inherently require a

telephone or similar communication device, Col. 3, Lines 60-65);

A voice recognition part for conducting voice recognition with respect to the voice

information, and analyzing contents of the voice information *(speech recognizer used to collect*

information such as account number or billing data, Col. 3, Line 48- Col. 4, Line 8);

A voice information mediation part for controlling a transmission path of the voice

information in accordance with the contents of the voice information *(detecting user mood based*

upon speech samples to transfer an IVR system user to an operator for assistance, Col. 4, Lines

40-48, and Col. 3, Lines 17-30);

An interaction engine for extracting contents of a response corresponding to the voice

information by referring to a knowledge database, and creating a synthesized voice in accordance

with the contents of a response *(interactive voice response unit that prompts a user for*

information, Col. 3, Lines 60-65, which would inherently require a memory for storing voice

prompts); and

A voice information output part for outputting the synthesized voice, wherein the voice

information mediation part monitors at all times whether or not the user's interaction is being

smoothly conducted, and in a case of determining that the user's interaction is not being

smoothly conducted, allows a third-party user to participate in interaction between the user and

the interaction engine from another terminal as a helper *(requesting user information, Col. 3,*

Lines 60-65, and transferring the call of a frustrated IVR system user to an operator, Col. 3,

Lines 17-30, and Col. 4, Lines 40-48).

Bohacek does not specifically suggest the ability to transfer a call to an operator when a

response reaction time limit is exceeded, however, Marx recites:

The voice information mediation part determines whether or not the user's interaction is

being smoothly conducted based on an average reaction time from a response of the interaction

engine to a reaction of the user, and in a case where the average reaction time exceeds a first

threshold value or in a case where the average reaction time is below a second threshold value,

allows a third-party user to participate in the interaction between the user and the interaction

engine from another terminal as a helper *(timeout condition used to initialize a call transfer to an*

operator, Col. 8, Lines 20-31, and Col. 9, Lines 52-65).

Bohacek and Marx are analogous art because they are from a similar field of endeavor in

interactive voice response systems. Thus, it would have been obvious to a person of ordinary

skill in the art, at the time of invention, to combine the use of a timeout condition to initialize a

call transfer to an operator as taught by Marx with the interactive voice response system capable

of transferring a caller to an operator upon detecting a predetermined level of frustration based

on speech data as taught by Bohacek in order to provide a further means of assisting an IVR

system user in accomplishing a desired call result when a lack of response indicates possible user

confusion. Therefore, it would have been obvious to combine Marx with Bohacek for the benefit

of providing proper user assistance in response to user confusion indicated by a lack of response.

With respect to **Claim 6**, Bohacek discloses:

The interaction engine further includes an interaction history information storage part for

recording interaction history on a user basis, and a helper selection part for selecting the third-

party user that is considered to be most familiar with the contents of the interaction from the

interaction history as a helper, and the helper most appropriate for contents of the voice

information is selected *(previous customer data used to route a call to the most appropriate*

operator, Col. 4, Lines 24-39, and Fig. 1).

With respect to **Claim 8**, Bohacek recites:

Interaction history display part for displaying the interaction history stored in the

interaction history information storage part to a third-party helper user, and a helper instruction

part for receiving a help instruction from the third-party helper user, wherein when the help

instruction part receives the help instruction from the third-party helper user, the voice

information mediation part enables the interaction between the third-party helper user and the

user to be conducted, and when a degree of help of the third-party helper user exceeds a

predetermined threshold value in interaction between the third-party helper user and the user, the

interaction engine interacts only with the third-party helper user *(transferring interaction control*

to an appropriate operator when an annoyance threshold is exceeded, displaying customer data,

and previous customer data, Col. 3, Lines 17-30, and Col. 4, Lines 30-39).

9.   **Claim 5, 11, 13, and 15-16** is rejected under 35 U.S.C. 103(a) as being unpatentable over

Bohacek et al in view of Marx et al, and further in view of Davis et al *(U.S. Patent: 5,583,922)*.

With respect to **Claims 5 and 15**, Bohacek in view of Marx teaches the interactive voice

response system and method capable of transferring a caller to an operator based upon a

frustration level, recognition engine error amount, or a timeout condition, as applied to Claim 3.

Bohacek in view of Marx does not specifically suggest the ability to determine interaction

progress through interaction time and access amounts in order to initialize parallel input

operator/user interaction, however Davis recites:

The contents of interaction with the user is displayed to the third-party user and the

contents of interaction is updated by the third-party user, parallel input in which the third-party

user conducts an input in parallel with the user, to switching in which the third-party user

directly interacts with the user *(user information transferred to an operator and direct*

communication through data or voice, Col. 11, Lines 48-58).

Bohacek, Marx, and Davis are analogous art because they are from a similar field of

endeavor in interactive voice response systems. Thus, it would have been obvious to a person of

ordinary skill in the art, at the time of invention, to combine the use of a parallel user/operator

input as taught by Davis with the interactive voice response system and method capable of

transferring a caller to an operator based upon a frustration level, recognition engine error

amount, or a timeout condition as taught by Bohacek in view of Marx in order to provide a

means for a user to maintain some system control while being aided in information entry by an

operator to ensure data accuracy in the condition that recognition or timeout errors occur.

Therefore, it would have been obvious to combine Davis with Bohacek in view of Marx for the

benefit of providing parallel input user assistance.

Claim 11 contains subject matter similar to Claim 6, and thus, is rejected for the same reasons.

Claim 13 contains subject matter similar to Claim 8, and thus, is rejected for the same reasons.

Claim 16 contains subject matter similar to Claims 5 and 10, and thus, is rejected for the same reasons.

10.   **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bohacek.

With respect to **Claim 10**, Bohacek teaches the interactive voice response system and method capable of transferring a caller to an operator upon detecting a predetermined level of frustration based on speech data, as applied to Claim 1. Although Bohacek does not specifically suggest method storage on a computer readable medium, the examiner takes official notice that it would have been obvious to one of ordinary skill in the art, at the time of invention, to store the IVR method taught by Bohacek on a computer readable medium to increase method compatibility and usability by providing a means for method use with multiple computer systems.

Allowable Subject Matter

11.   **Claims 7, 12, and 14** are allowed.

12.   The following is a statement of reasons for the indication of allowable subject matter:

With respect to **Claim 7**, the prior art of record does not explicitly teach nor fairly

suggests: the ability of an operator to assume complete control of an voice interaction engine in

an interactive voice response system when it is detected that only an operator's voice continues

for a predetermined time period during an error-initiated operator interaction session, in

combination with a help request notification used for informing an operator of a user's failure to

respond to an interactive voice system (error) and allowing the operator to voluntarily interact

with the user in response to such a notification. Further the prior art of record also does not teach

or fairly suggest the above features in combination with the aforementioned voice response

system, wherein the voice response system utilizes a voice information mediation portion for

performing the interaction error detection based on response time and sound quality thresholds to

decide whether to transfer a user to third party operator assistance.

Claims 12 and 14 further limit allowable claim 7, and thus are also considered allowable.

Conclusion

13.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

14.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

    Stuart et al *(U.S. Patent: 6,243,684)*- teaches an interactive voice response system

having varying levels of operator interaction.

15.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632

and email is James.Wozniak@uspto.gov. The examiner can normally be reached on Mondays-

Fridays, 8:30-4:30.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wayne Young can be reached at (571) 272-7582. The fax/phone number for the

Technology Center 2600 where this application is assigned is (703) 872-9306.

    Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the technology center receptionist whose telephone number is (703) 306-

0377.

James S. Wozniak
5/25/2005

DAVID L. OMETZ
PRIMARY EXAMINER